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EXAMINER

RUTTEN, JAMES D

ART UNIT	PAPER NUMBER.
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2122

DATE MAILED: 06/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/726,290

Applicant(s)

KEHNE ET AL.

Examiner

J. Derek Rutten

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

### DETAILED ACTION

1. Applicants' amendment dated 11 March 2004, responding to the 18 December 2003 Office Action provided in the rejection of claims 1-36, wherein independent claims 1, 7, 13, 19, 25, and 31 have been amended. Claims 1-36 remain pending in the application and have been fully considered by the examiner.

Applicant's arguments with respect to the rejection of the claims have been considered but are moot in view of the new grounds of rejection.

2. Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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***Claim Rejections***

3. Claims 1-36 stand finally rejected. Claims 1, 3, 4, 6, 7, 10, 12, 13, 15, 16, 18, 19, 22, 24, 25, 27, 28, 30, 31, 34, and 36 are finally rejected as being unpatentable over Applicant's admission of prior art (APA) in view of prior art of record U.S. Patent 5,822,692 to Krishnan et al. and further in view of U.S. Patent 5,339,450 to Nagahara. Claims 2, 8, 14, 20, 26, and 32 are finally rejected as being unpatentable over the combination of APA, Krishnan and Nagahara and further in view of prior art of record U.S. Patent 6,357,021 to Kitagawa et al. Claims 5, 11, 17, 23, 29, and 35 are finally rejected as being unpatentable over the combination of APA, Krishnan and Nagahara and further in view of prior art of record "Programming Embedded Systems in C and C++" by Michael Barr. Claims 9, 21, and 33 are finally rejected as being unpatentable over the combination of APA, Krishnan, Nagahara, and Kitagawa and further in view of prior art of record "Computer User's Dictionary" by Microsoft Press.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 3, 4, 6, 7, 10, 12, 13, 15, 16, 18, 19, 22, 24, 25, 27, 28, 30, 31, 34, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admission of prior art on pages 1 and 2 of the specification (hereinafter referred to as "APA"), in view of prior art of record U.S. Patent 5,822,692 to Krishnan et al. published on October 13, 1998 (hereinafter

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referred to as “Krishnan”), further in view of U.S. Patent 5,339,450 to Nagahara (hereinafter referred to as “Nagahara”).

As per claim 1, APA discloses:

*determining, by a service processor, whether a system component has a current level of the firmware (page 1 line 32 – page 2 line 5: “At this time, the SPCN task will read the SPCN firmware level (i.e. version) on the service processor flash. If that firmware level does not match with the level of firmware on the SPCN card, then the SPCN task will transmit a new SPCN firmware image to the SPCN card while the OS is running.” The SPCN task is run by the service processor.); and*

*responsive to a determination that the system component does not have the current level of the firmware, updating a copy of the firmware stored in the system component (page 2 lines 2-5 as cited above).*

*APA does not disclose receiving a notification that control has been transferred to a host operating system following completion of an initialization procedure or updating in a background operation while the data processing system remains available to a user for other actions.*

However, in an analogous environment, Nagahara teaches sending notification to a service processor (SVP) that an operating system is running and initialized (column 8 lines 21-27: “The input/output instruction for the operating system message (this instruction notifies that the operating system is stored in the main storage unit 2 to the SVP terminal 10 and moreover **sequentially notifies the executing condition of OS to**

**an operator**) is transferred to the host command program 324 of SVP 3 through the multiplexer channel and CIA 37 of SVP 3.”).

Also in an analogous environment, Krishnan teaches updating the firmware on a PCMCIA device that operates under control of an operating system (column 16 lines 8-10: “If the **host** has a newer version of the firmware, it **transmits** the newer **version** to data communication device **10** via TXD line **140**.”) The operation of transmitting is inherently performed under the control of a host operating system that conforms to the PCMCIA standard. Furthermore, operation of a PCMCIA device inherently allows the device to be powered on, powered off, and updated in a background operation of the host operating system according the PCMCIA standard (note that further information regarding PCMCIA technology can be found in “An Introduction to PCMCIA and PC Card Technology” by Synchrotech).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the firmware update method of APA with Nagahara’s notification signal and Krishnan’s background update. One of ordinary skill in the art would have been motivated to update the firmware of a device to correct software bugs in a manner that is convenient with minimal downtime of the system. One would be further motivated to routinely and automatically install available firmware upgrades to ensure correction of bugs.

As per claim 3, APA discloses a *system power control network card in an input/output drawer* (see page 1 line 31, and page 2 line 7).

As per claim 4, APA discloses *transferring current firmware stored in non-volatile memory accessible by the service processor* (page 2 lines 1-2).

As per claim 6, APA discloses a *flash memory* (page 2 lines 1-2).

As per claim 7, APA discloses:

*determining whether a level of a firmware copy on a system component matches a current level of firmware stored on a non-volatile memory within the system* (page 1 line 32 – page 2 line 5: “At this time, the SPCN task will read the SPCN firmware level (i.e. version) on the service processor **flash**. If that firmware level does not match with the level of firmware on the **SPCN card**, then the SPCN task will transmit a new SPCN firmware image to the SPCN card while the OS is running.”); *and*

*responsive to a determination that the level of the firmware copy is different from the current level, transferring the current level of firmware to the system component to update the firmware copy on the system component* (see page 1 line 32 – page 2 line 5 as cited above).

All further limitations have been addressed in the above rejection of claim 1.

As per claim 10, APA discloses a *system power control network card in an input/output drawer* (see page 1 line 31, and page 2 line 7).

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As per claim 12, APA discloses a *flash memory* (page 2 lines 1-2).

As per claim 13, this is a computer program product version of the claimed method discussed above in claim 1. Furthermore, APA discloses firmware, which is inherently provided by a computer program product (See page 1 line 26). Such a computer program product must have been used otherwise the computer system would be inoperative.

All other limitations have been addressed in the rejection of claim 1 above.

As per claims 15, 16, and 18, the rejection of claim 13 is incorporated, and further, all other limitations have been addressed in the rejection of claims 3, 4, and 6, respectively.

As per claim 19, this is a computer program product version of the claimed method discussed above in claim 7. Furthermore, APA discloses firmware, which is inherently produced by a computer program product (See page 1 line 26). Such a computer program product must have been used otherwise the computer system would be inoperative.

All other limitations have been addressed in the rejection of claim 7 above.



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As per claims 22 and 24, the rejection of claim 19 is incorporated, and further, all other limitations have been addressed above in the rejections of claims 10 and 12, respectively.

As per claim 25, this is a system version of the claimed method discussed above in claim 1. Furthermore, APA discloses a *system* (See page 1 line 21).

All other limitations have been addressed in the rejection of claim 1 above.

As per claims 27, 28, and 30, the rejection of claim 25 is incorporated, and further, all other limitations have been addressed in the rejection of claims 3, 4, and 6, respectively.

As per claim 31, this is a system version of the claimed method discussed above in claim 7. Furthermore, APA discloses a *system* (See page 1 line 21).

All other limitations have been addressed in the rejection of claim 7 above.

As per claims 34 and 36, the rejection of claim 31 is incorporated, and further, all other limitations have been addressed above in the rejections of claims 10 and 12, respectively.

6. Claims 2, 8, 14, 20, 26, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of APA, Krishnan and Nagahara as applied to claims 1, 7, 13, 19, 25, and

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31 above, and further in view of prior art of record U.S. Patent 6,357,021 to Kitagawa et al. published on March 12, 2002 (hereinafter referred to as "Kitagawa").

As per claims 2 and 8, the above rejections of claims 1 and 7, respectively, are incorporated, and further, the combination of APA and Krishnan does not expressly disclose *notification of an update failure*.

However, in an analogous environment, Kitagawa teaches *notifying a user of a firmware update failure* (column 4 line 67 – column 5 line 4).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the firmware update mechanisms of the combination of APA and Krishnan with Kitagawa's failure notification. One of ordinary skill would have been motivated to make a user aware of the status of an update.

As per claims 14 and 26, the rejection of claims 13 and 25 is incorporated, respectively, and further, all other limitations have been addressed above in the rejection of claim 2.

As per claims 20 and 32, the rejection of claims 19 and 31 is incorporated, respectively, and further, all other limitations have been addressed above in the rejection of claim 8.

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7. Claims 5, 11, 17, 23, 29, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of APA, Krishnan and Nagahara as applied to claims 4, 7, 16, 19, 28, and 31, respectively, above, and further in view of "Programming Embedded Systems in C and C++" by Michael Barr, published in January 1999 (hereinafter referred to as "Barr").

As per claims 5 and 11, the rejection of claims 4 and 7, respectively, are incorporated, and further, the combination of APA and Krishnan does not expressly disclose the use of non-volatile random access memory (NVRAM).

However, in an analogous environment, Barr teaches using NVRAM to store data.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the firmware update mechanism of the combination of APA and Krishnan with Barr's NVRAM. One of ordinary skill would have been motivated to provide fast access to data.

As per claims 17 and 29, the above rejection of claims 16 and 28 is incorporated, respectively, and further, all other limitations have been addressed above in the rejection of claim 5.

As per claims 23 and 35, the above rejection of claims 19 and 31 is incorporated, respectively, and further, all other limitations have been addressed above in the rejection of claim 11.

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8. Claims 9, 21, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of APA, Krishnan, Nagahara, and Kitagawa as applied to claims 8, 20, and 32, respectively, above, and further in view of “Computer User’s Dictionary” by Microsoft Press, published 1998 (hereinafter referred to as “Microsoft”).

As per claim 9, the above rejection of claim 8 is incorporated, and further, the combination of APA, Krishnan, and Kitagawa, in particular, Kitagawa provides with such means of notification (column 4 line 67 – column 5 line 4), but does not expressly disclose *a log file*.

However, in an analogous environment, Microsoft teaches the definition of such log file (page 213).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the notification teachings (Kitagawa) of the combination of APA, Krishnan, and Kitagawa with Microsoft’s teaching of a log file. One of ordinary skill would have been motivated to keep a full record of failures for maintenance purposes.

As per claims 21 and 33, the above rejections of claims 20 and 32 are incorporated, respectively. All other limitations have been addressed in the above rejection of claim 9.

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***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Derek Rutten whose telephone number is (703) 605-5233. The examiner can normally be reached on M-F 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (703) 305-4552. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jdr

  
**TUAN DAM**  
**SUPERVISORY PATENT EXAMINER**